**Tools and Libraries**

Make sure you have the following libraries installed:

* TensorFlow/Keras or PyTorch (for building and training the model)
* OpenCV or Pillow (for image processing)
* NumPy (for numerical operations)
* Matplotlib/Seaborn (for visualization)
* scikit-learn (for additional utilities like splitting the data)

### Conclusion

This guide provides a basic framework for setting up a dog vs. cat classification project using a convolutional neural network (CNN). You can enhance the model with more advanced architectures, hyperparameter tuning, and additional data augmentation techniques for better performance